25019

Determination of the density   ...

S/052/61/006/002/006/006
C111/C222

The author seeks the density of the probabilities $P(y_1, \ldots, y_n, t)$ for the Markov process $y(t) = (y_1(t), \ldots, y_n(t))$.

The investigation is based on the following older results :
Theorem 1 : Let $y(t)$ be an n-dimensional Markov process (let almost all trajectories be continuous) satisfying the conditions :

$$\lim_{\Delta t \to o} \frac{1}{\Delta t} M\left\{ (y_i(t+\Delta t) - y_i(t) | y(t) = x \right\} = A_i(x, t) ,$$

$$\lim_{\Delta t \to o} \frac{1}{\Delta t} M\left\{ (y_i(t+\Delta t) - y_i(t))(y_j(t+\Delta t) - y_j(t)) | y(t) = x \right\} = B_{ij}(x, t),$$

(here $M\left\{ \ldots | \ldots \right\}$ is the conditional mathematical expectation, $i,j=1,\ldots n$), where A_i , B_{ij} are functions being continuous together with their derivatives ; $\sum B_{ij} \lambda_i \lambda_j$ is a positive definite quadratic form. Then for the process $y(t)$ there exists a probability density $P(y, t)$ satisfying the Kolmogorov-equation

Card 2/5

$$\frac{\partial P}{\partial t} + \sum_{i=1}^{n} \frac{\partial}{\partial y_i} \{A_i P\} = \frac{1}{2} \sum_{i,j=1}^{n} \frac{\partial^2}{\partial y_i \partial y_j} \{B_{ij} P\} . \qquad (2)$$

Theorem 2 : Let $g(y, t ; \eta, \tau)$ be the density of the probability of the transition from the point η to which there corresponds the moment τ, in the neighborhood of the point y (moment t) for the Markov process y(t) satisfying the conditions of Theorem 1. Then $g(y, t ; \eta, \tau)$, $t > \tau$ satisfies the equation (2) in the variables $y_1, \ldots, y_n$, t. In the

variables $\eta_1, \ldots, \eta_n, \tau$, g satisfies the conjugate equation

$$\frac{\partial g}{\partial \tau} + \sum_{i=1}^{n} A_i(\eta, \tau) \frac{\partial g}{\partial \eta_i} + \sum_{i,j=1}^{n} \frac{1}{2} B_{ij}(\eta, \tau) \frac{\partial^2 g}{\partial \eta_i \partial \eta_j} = 0 . \qquad (3)$$

Besides : $g(y, t ; \eta, \tau) \to \delta(y - \eta)$ for $t - \tau \to 0$, where δ is the Delta-function.
Because of the piecewise linear and constant character, respectively, of the functions F_i and a_{ij} the space decomposes into a number of regions

Card 3/5

in which all functions are continuous and differentiable ; the process
described by (1) satisfies the assumptions of theorem 1, where $A_i(y,t) =$

$= F_i(y,t)$, $B_{ij} = \sum_{k=1}^{n} a_{ik}a_{jk}$, so that $P(y,t)$ satisfies (2). On the

planes by which the above mentioned regions are bounded let P assume
certain values P^* , where $\partial P^*/\partial n$ be the derivative with respect to
the normal to these planes. Inside every region the solution of (2) can
be represented in integral form by the boundary values P^*, $\partial P^*/\partial n$.
After use of the boundary conditions one obtains a system of linear
integral equations for the determination of the unknowns P^* and
$\partial P^*/\partial n$. The integral form of the solution of (2) in the given region
is found with the aid of the fundamental solution of (2) which is
continued from the region in the whole space. Here the author uses
theorem 2 according to which the fundamental solution of (2) - considered
in the whole space - agrees with the transition probability of a certain
random Markov process. This process is described by linear differential
equations so that its transition probability can easily be determined.

Card 4/5

25019

Determination of the density ...

S/052/61/006/002/006/006
C111/C222

The application of the described method for the determination of $P(y,t)$ is shown by two examples (all-relay system, linear detector).

The author mentions Andrey Nikolayevich Kolmogorov. There are 2 figures, 5 Soviet-bloc and 5 non-Soviet-bloc references. The references to the two English-language publications read as follows : J.L. Doob, Veroyat-nostnyye protsessy (Stochastic processes), M., IL, 1956 , Dressel, The fundamental solution of the parabolic equation, Duke Math.Journal ; 7, 186 (1940) ; 13, 61 (1946).

SUBMITTED: October 20, 1960

Card 5/5

42540

S/020/62/147/001/008/022
B104/B102

10.1200

AUTHOR: Khazen, E. M.

TITLE: Theory of turbulence in nonuniform flows

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 1, 1962, 60 - 63

TEXT: The effect of turbulent pulsation on the averaged flow of an incompressible viscous fluid is taken into account by the correlation function

$$b_{ij}(\vec{x},t) = \overline{\delta V_j(\vec{x},t)\delta V_i(\vec{x},t)}$$ in equation

$$\frac{\partial U_i}{\partial t} + U_j \frac{\partial U_i}{\partial x_j} = \nu \Delta U_i - \frac{1}{\rho}\frac{\partial p}{\partial x_i} - \frac{\partial \overline{(\delta V_i(x,t)\delta V_j(x,t))}}{\partial x_j} \qquad (1)$$

of the averaged motion. If turbulence is weak and if the terms having the order of $\overline{\delta V_i \delta V_j \delta V_k}$ are neglected when averaging, the Navier-Stokes equations give

Card 1/3

$$\frac{\partial b_{ij}(x, x', t)}{\partial t} + \left(U_k(x, t)\frac{\partial}{\partial x_k} + U_k(x', t)\frac{\partial}{\partial x_k} \right) b_{ij}(x, x', t) +$$

$$+ \frac{\partial U_l}{\partial x_k} b_{kj} + \frac{\partial U_j}{\partial x_k} b_{ik} = -\frac{1}{\rho}\left(\frac{\partial b_{\rho j}}{\partial x_l} + \frac{\partial b_{l\rho}}{\partial x_j} \right) + \nu\Delta_x b_{ij} + \nu\Delta_{x'} b_{ij}. \qquad (2).$$

A nonuniform flow is studied in which the initial disturbances are such that the maximum measure l of turbulence is smaller than the characteristic measure L of the averaged flow. Under these conditions the spectral function

$$\Phi_{ij}(k, x, t) = \int_{-\infty}^{\infty} e^{ikr} \overline{\delta V_i(x - r/2)\,\delta V_j(x + r/2)}\,dr, \qquad (3)$$

of the pulsations is introduced which depends on x only implicitly via the slowly varying function $\vec{U}(\vec{x}, t)$.   (2) and the derivatives of $\vec{U}(\vec{x}, t)$ gives

$$\left(\frac{\partial}{\partial t} + U_k\frac{\partial}{\partial x_k} \right)\Phi_{ij}(k, x, t) - \frac{\partial U_k}{\partial x_l}k_k\frac{\partial}{\partial k_l}\Phi_{ij} + \qquad (4).$$

$$+ \frac{\partial U_l}{\partial x_k}\left(\delta_{ij} - 2\frac{k_ik_l}{k^2} \right)\Phi_{kj} + \frac{\partial U_j}{\partial x_k}\left(\delta_{ij} - 2\frac{k_lk_j}{k^2} \right)\Phi_{ik} = -2\nu k^2\Phi_{ij}.$$

Card 2/3

Theory of turbulence in...

S/020/62/147/001/008/022
B104/B102

In a detailed study of this system it is shown that a laminar flow becomes turbulent in the following way: The random vortex disturbances with small amplitude increase in a nonuniform flow. If the Reynolds number and the initial amplitude are such that maximum pulsation amplitude does not exceed a certain threshold, then the pulsation gradually vanishes. Otherwise the laminar flow becomes turbulent.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: August 2, 1962, by A. N. Kolmogorov, Academician

SUBMITTED: August 2, 1962

Card 3/3

KHAZEN, E.M.

Theory of turbulence in inhomogeneous flows. Dokl.
AN SSSR 147 no.1:60-63 N '62.   (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom A.N. Kolmogorovym.
        (Hydrodynamics)   (Turbulence)

KHAZEN, E.M.

Nonlinear theory of the genesis of turbulence. Dokl. AN
SSSR 153 no.6:1284-1287 D '63.   (MIRA 17:1)

1. Predstavleno akademikom A.N. Kolmogorovym.

KHAZEN, E. M. (Moscow)

"Statistical theory of the turbulence formation".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

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of turbulence. This report was presented by A. N. Kolmogorov. Orig.
figures and 18 formulas.

ASSOCIATION: None

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SUB REF SOV:	002		OTHER:	000			

Card 2/2

ABSTRACT: The authors consider the problem of distinguishing between multiple hypotheses and recognition of hypotheses in the absence of complete information concerning the laws governing their distribution. A unified synthesis procedure for rules of sequential solution for such problems is proposed. The sequential procedure consists in constructing a certain function (or certain statistics) $L(x_1,\dots,x_m)$ on the basis of observed values $x_1,\dots,x_m$, and a comparison with threshold values. In the general case, these threshold values vary as functions of the time or number of observations. Optimum variable threshold values are determined by means of recurrent estimates of the conditional risk for this function. The selection of the statistics L is performed with regard to the limitations of the required memory capacity. The sequential

Card 1/3

ACC NR: AP6033937

rules derived can be implemented with relative ease. The sequential solution rule in the presence of two simple hypotheses is explained as follows: let $P_{\theta_1}(x_1,\ldots,x_m)$ be the conditional probability density of the values $x_1, x_2,\ldots,x_m$ observed under conditions when the value of the parameters equals $\theta_i (i = 1,2,)$. Then, to obtain a solution, a probability relation is constructed

$$L_m = L(x_1, x_2, \ldots, x_m) = \frac{P_{\theta_1}(x_1, x_2, \ldots, x_m)}{P_{\theta_2}(x_1, x_2, \ldots, x_m)}$$

and compared with the thresholds A and B. If $L_m \geq A$, the hypothesis $\theta = \theta_1$ is assumed to be correct, if $L_m \leq B$, the hypothesis $\theta = \theta_2$ is assumed to be true; if, however, $B < L_m < A$, another observation is carried out to get x_{m+1}; L_{m+1} is constructed and compared with the threshold A and B. If θ_1 and θ_2 are constants, $P_{\theta_1}(x_1,\ldots,x_m)$ are known functions and the experimental conditions do not change during the observation, then the thresholds A and B are also constant, independent of the number of observations. This rule provides an effective solution for distinguishing between two simple hypotheses. However, as a rule, the problems involve not two, but many competing hypotheses. Furthermore, the conditional probability density may not be known. The

Card 2/3

Card. 3/3

KHAZEN, I. M.

The secretory and excretory function of intestines under reduced, barometric pressure. I. M. Khazen. *Arch. Sci. biol.* (U. S. S. R.) 58, No. 3, 86-97 (in English, 98) (1940).—In dogs with Thiry loops, when kept at a pressure equiv. to altitudes 6000 and 8000 m., intestinal secretion and its urea content decrease, the digestive power of the juice increases. The lactic acid content increases as an aftereffect, and the dry residue is somewhat reduced and stays at a low level for 2 mos. Pathologically induced spontaneous secretion is characterized by changes similar to those found in the denervated intestinal loops transplanted under the skin. Repeated exposure to reduced pressure leads to adaptation.   T. Laanes

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KHAZEN, I. M.

Variation of relationships between the secretory and excretory function of the intestine. I. M. Khazen. *J. Physiol.* (U. S. S. R.) 28, 345–53 (in German, 353) (1940). — The secretory and excretory functions of the intestinal mucosa are independent processes. Atropine greatly inhibits the excretion of urea in a denervated intestinal loop. Dogs with a Thiry fistula require large doses of atropine to produce the effect. Pilocarpine increases the excretion of lactic acid, but does not restore urea excretion previously decreased by atropine treatment. Atropine lowers the amt. of gastric juice and enhances the amylolytic and ereptic power of the juice. Pilocarpine somewhat stimulates secretion. Adrenaline has no effect on secretion or excretion.

T. Laane

KHAZEN, I. M.

CA

Carbonic anhydrase activity in the blood and in some tissues of the body under reduced atmospheric pressure. V. V. Strel'tsov and I. M. Khazen (Central Inst. for Advanced Med., Moscow). *Byull. Eksptl. Biol. Med.* 21, No. 4, 65–8(1946).—Human subjects and rabbits were exposed to altitudes of 5000–8000 m. for 1–3 hrs., the rate of elevation being 18–20 m./sec. At 5000 m. there is usually first a decrease in carbonic anhydrase (I) level of the blood, then, after 3 hrs., an increase to 2–3 times normal values. At 8000 m. a similar increase occurs within 1 hr. There is a simultaneous lowering in I activity of the gastric mucosa, inhibition of gastric secretion, and lowering of gastric acidity. At heights of 11,000–12,000 m. (with use of O-equipment) blood I activity was increased considerably in untrained individuals, while it remained normal in trained flyers. I index may be a useful test for ability of flyers to stand reduced barometric pressure.

H. A. Wegner

PROCESSES AND PROPERTIES WITH

The role of the vegetative nervous system in the mechanism of physiological regulation of activity of carbonic anhydrase under reduced barometric pressure. II. Influence of parasympathicotropic, sympathicotropic, and some other pharmacological substances on carbonic anhydrase activity. I. M. Kharen. Byull. Eksptl. Biol. Med. 23, 44 (1947); M. C. A. 41, 2764. The following variations of the activity of carbonic anhydrase (I) of rabbits were observed after administration (subcutaneous) of the following drugs: 1 mg. atropine, 70-80% increase; 1 mg. adrenaline, no substantial change; 1 mg. morphine, 10-25% decrease, 1 mg. strychnine, no substantial change; injections of equal vols. of distd. water also gave no change. Injection of 70-500 γ of histamine gave an increase of 80-300%. When the histamine was given to rabbits which were kept for a month on 100-500 γ daily doses of thiouracil, the histamine effect was essentially nullified and the enzyme activity remained within exptl. variations. In a 2nd series of expts. the rabbits were injected with either 1-2 cc. 0.1% atropine or 0.5-1.0 cc. 1:1000 adrenaline and after 10 min. were placed in a vacuum chamber set to simulate 8,000 m. altitude for 1 hr. The atropinized rabbits showed no change of I activity after evacuation of the chamber while the control animals showed 100% increase. The adrenaline-treated animals showed a 70% increase in I activity. Several of the latter animals perished during the expt. Changes of I activity were not connected with changes of erythrocyte count.

G. M. Kosolapoff

METALLURGICAL LITERATURE CLASSIFICATION

BAMDAS, B.S.; GLOD, G.D.; LANDO, L.I.; LEVKOVICH, A.P.; TARASOV, G.K.;
KHAZEN, I.M.(Moskva)

Data on the mechanism of action of aminazine. Zhur. nevr. i psikh.
56 no.2:121-138 '56.
(MLRA 9:5)

1.Voyennyy fakul'tet pri Tsentral'nom institute usovershenstvovaniya
vrachey, kafedra psikhiatrii (zav.-prof. A.V. Snezhnevskiy)
TSentral'nogo instituta Usovershenstvovaniya vrachey i Gosudarstvennyy
institut psikhiatrii (dir.-dotsent D.Ye. Melekhov) Ministerstva
zdravookhraneniya RSFSR,
         (CHLORPROMAZINE, effects,
              mechanism of action (Rus))

KHAZEN, I.M.;   KUZNETS, Ye.I.

Effect of great drops in barometric pressure on the higher nervous
activity of animals (white rats) during microintervals of time.
Dokl. AN SSSR 108 no.5:985-987 Je '56.   (MIRA 9:10)

1. TSentral'nyy institut usovershenstvovaniya vrachey, Moskva,Pred-
stavleno akademikom L.A. Orbeli.
          (ATMOSPHERIC PRESSURE--PHYSIOLOGICAL EFFECT)

17(10)   SOV/177-58-3-13/29
AUTHOR: Khazen, I.M., Colonel of Medical Service, Professor

TITLE: On the Regulation of Functions of the Organism During
               Radial Acceleration

PERIODICAL: Voyenno-Meditsinskiy Zhurnal, 1958, Nr 3, pp 55-60
               (USSR)

ABSTRACT: To clarify the regulation of the functions of the orga-
               nism during radial acceleration, experiments on animals
               were made studying the secretions of the saliva, sto-
               mach and intestinal glands, as well as the motion of
               an empty stomach (P.M. Suvorov, I.L. Waysfel'd, A.S.
               Barer). Simultaneously some functions of breathing
               and blood circultation were observed; the stomach
               secretion of human beings was studied. Experiments
               were carried out on ten dogs, and as a rule radial ac-
               celeration was followed by a temporary inhibition of
               saliva secretion. Changes were particularly marked at
               accelerations of 5g/20 secs in the direction pelvis -
               head, when the consequences lasted up to 24 hrs or
Card 1/3   longer. During acceleration of 3-5g/30 secs in the

                                                    SOV/177-58-3-13/29
On the Regulation of Functions of the Organism During Radial Ac-
celeration

               direction head - pelvis, and also for 15-30 mins after-
               wards, sharp inhibition of the secretory function of
               the stomach and even complete cessation of separation
               of juices was observed on a human patient. As a re-
               sult of repeated accelerations (up to 8 at intervals
               over a period of 5-6 days) only a certain tendency to
               even out changes was noted in the secretion of stomach
               juice. Analysis of the results shows that while the
               effects on the saliva glands are operative for a brief
               period (tens of minutes), and on the stomach glands
               for a few hours, the secretory processes of the glands
               of the isolated intestinal loop are affected for days,
               and for weeks in the case of large accelerations. Stop-
               page of breathing, which is often noted at the moment
               of maximum load and is generally restored after 10-15
               seconds can scarcely influence the process of intesti-
               nal secretion. Intramural innervation cannot be ex-
               cluded as an influence on the changes described earlier.
Card 2/3   Increasing accelerations invariably caused cessation

               practical importance to the choice of a physiological-
               ly well-founded aircrew diet. There are 3 photographs
               and 2 Soviet references.
Card 3/3

KHAZEN, I. M., (USSR)

The Dynamics of Changes of Biologically active Substances in Organism as Affected by
Acceleration of Gravity.

> report presented at the 5th Int'l.
> Biochemistry Congress, Moscow, 10-16 Aug. 1961

KHAZEN, I.M.; VAYSFEL'D, I.L.   (Moskva)

Changes in the content of biologically active substances in
rats under the effect of radial acceleration. Vop. med.
khim 8 no.5:493-497   S-0'62   (MIRA 17:4)

ACC: AP0046194

Biologiya. Synopsys

.sen, I. M.; Kogan, E. M.;

Physiological changes

Avtata. i kosmich.

TOPIC TAGS: rat, acceleration, biological effect, brain, blood, vascular system, histology, pathology

TRANSLATION: The effect of 10 g acceleration was investigated in rats for 1 min a day followed by 7 days interval for a period of 8 weeks. Other animals were subjected to 10 g acceleration for 1 min 4 times a day with 30 min intervals. In the 3rd series overloading consisted of 5 g for a period of 20 min. Mild symptoms of stasis were found in

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FEDOROV, I.V.; KHAZEN, I.M.; STURUA, G.G.

Change in the correlations between excretions of 17-hydroxycorti-
costeroids and 5-hydroxyindoleacetic acids in pilots. Vop. med.
khim. 9 no.6:583-587 N-D '63.   (MIRA 17:10)

Abstracts   Sov. 576

... M. (Moscow)

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min. Food-conditioned motor reflexes were also developed in these rats. The general response of the conditioned rats to drops in atmospheric pressure was good. Some of the experimental animals, after exposure to increased pressure displayed significantly prolonged latent periods of conditioned-reflex activity. The condition of general animals was poor and there was a significant disruption of

ACC NR: AT6036625   SOURCE CODE: UR/0000/66/000/000/0321/0322

AUTHOR: Razumov, M. I.; Khazen, I. M.

ORG: none

TITLE: Functional and histological changes in the liver during acceleration
[Paper presented at the Conference on Problems of Space Medicine held in Moscow
from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy
kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii,
Moscow, 1966, 321-322

TOPIC TAGS: biologic acceleration effect, liver, biologic secretion, animal
physiology, biologic metabolism

ABSTRACT:
    The effect of acceleration on processes of intracellular metabolism has
recently received more attention. Due to its size, abundant blood supply,
and flexibility in the abdomen, unique disorders occur in the liver under the
influence of acceleration.

    Studies were conducted on 8 dogs which were exposed once to 8-G chest-
back acceleration for 3 min. The animals were killed at various periods
Card 1/3

ACC NR: AT6036625

after exposure and always 20 hr after feeding. Tissue samples were taken
while the animals were alive under morphine-ether anesthesia and each in-
vestigation was conducted with a control.

    The general reaction of the liver during accelerations was characterized
by moderate fatty infiltration of epithelial cells which was observed from the
second to the thirtieth day after exposure. Cholesterol precipitation was
observed in individual or small groups of epithelial cells.

    Neutral fat globules and trivalent iron was found in the cytoplasm of
Kupffer cells (animals killed 3 days after exposure). Impurities in the form
of brilliant, powerfully refractive crystals of prismatic form were noted in
the nuclei of many trabecular cells. These crystals were noted in paraffin,
frozen, and celluloid sections using various fixing fluids (acetone, ethalone,
Carnoy's fixing fluid, formalin). Birefringence was noted in polarized light.
No polysaccharide or lipid components were noted in the crystals.
Their protein nature was indicated. In some isolated cells, paired crys-
tals parallel to one another were occasionally noted. Injury to intracellular
structures of the liver epithelium included nuclear dislocation in the cyto-
plasm and chromatin disruption of nuclear matter. As a result, protein syn-
thesis was altered. Precipitation in nuclear matter results in the formation

Card 2/3

ACC NR: AT6036625

of prismatic crystals. The nucleus containing protein crystals together with noncrystalline precursors was noted in only a small number of epithelial cells located in internal liver lobules from 3—30 days after exposure. In a parallel, control experiment, these changes in Kupffer and epithelial cells were not observed.

The altered metabolic processes of hepatic cells probably depend not only on the direct effect of mechanical forces which injure the intracellular structure, but on the altered structure of other organs and tissues such as the stomach, pancreas, and small intestine. It is possible that accelerations intensify the liberation of biologically active substances into the blood which reach liver capillaries and act as specific stimuli of phenoloxidase synthesis in the cytoplasm of Kupffer cells. The activity sharply increased in the first and second days after exposure to acceleration.

The presence of crystalline structures in cell nuclei has been observed for the first time. These studies are being continued on other animal species.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

L 08841-67 EWT(1) SCTB DD/GD

ACC NR: AT0036079   SOURCE CODE: UR/0000/66/000/000/0376/0377

AUTHOR: Khazen, I. M.

ORG: none

TITLE: New data on the effect of accelerations on the secretory and motor functions of the digestive system /Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966/

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy Kosmicheskoy meditsiny. (Problems of space medicine); materialy konferent ii, Moscow, 1966, 376-377

TOPIC TAGS: biologic acceleration effect, digestive system, biologic secretion, weightlessness

ABSTRACT:
    During accelerations which differ in magnitude, direction, and duration changes in the function of salivary, gastric, pancreatic, and intestinal glands occur. There is a similarity in phase shifts involving secretion and the formation of enzymes (amylase, enterokinase, trypsin, alkaline phosphatase, and lysozyme). These changes depend both on neural and humoral regulatory mechanisms of tissues and organs of the digestive

Card 1/3

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tract as well as on original functional state and the stress magnitude.
During transverse spine-chest accelerations substantial shifts occur at
4 G. At 8 G in the same direction for 3 min, the duration of aftereffect
reaches 10—12 weeks. Along with changes in secretory processes, dis-
ruption of the coordination of gastric motor periodicity and in particular,
the periodicity of the duodenum occurs. The duration of aftereffect reaches
almost three weeks. These changes are associated with a definite char-
acteristic of the stimulus conbined with pathomorphologic and histochemical
disruptions of tissue structures in the digestive and other systems of the
organism. The most deleterious shifts were noted in gastric glands and
in liver cells. They were observed beginning with the third to the thirtieth
day.   These data help in understanding changes in the metabolism of biogenic
amines: adrenalin, acetylcholine, norepinephrin, serotonin, and histamine,
as well as changes in cholesterol metabolism. It should be noted that all
of these functional and structural disorders take place in the absence of
any changes in the general state or behavior of animals.

    During hypoxia and acceleration, selective disruption of various organs
and tissues of the digestive system occurs which indicates an insufficiency
of neural and humoral mechanisms affecting autonomic regulation. Adaptive
and compensatory readjustments are also observed, which not infrequently

Card 2/3

L 08841-67

ACC NR: AT6036679

occur without any connection between functional and structural disruptions in the glandular mechanism of the digestive system. It is hypothesized that disruption of complex adaptive and compensatory processes which determine the integrity and function of the whole organism is a direct cause of the development of pathology under the effect of extremal stresses.

Results of these studies revealed the significance of the neuroglandular apparatus of the digestive system as an index of the reaction of the organism during accelerations. These experiments permit planning practical measures for preventing concealed, well-compensated disruptions caused by accelerations. This is of importance because the very same changes in the secretory and motor activity of the stomach have been observed in humans exposed to accelerations. On a background of prolonged aftereffect, weightlessness along with other stimuli characteristic of spaceflight (hypodynamia, etc.) can cause paradoxical reactions. Diet can have substantial influence in this case. The significance of these data relative to creating physiologic bases of space-crew nutrition is evident. /W. A. No. 22; ATD Report 66-116/

SUB CODE: 06 / SUBM DATE: 00May66

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15.9110   1372, 1474,

S/138/61/000/003/005/006
A051/A129

AUTHORS: Sandomirskiy, D. M.; Fogel', V. O.; Khazen, L. Z., and
Khu Yu-Mu

TITLE: The effect of the gelatinization process of latex on the change
of its heat- and electro-conductivity

PERIODICAL: Kauchuk i rezina, no. 3, 1961, 26-30

TEXT: The authors have investigated some simple systems consisting of
latex and a small quantity of gelatinizing agents, in order to determine the
kinetics of the processes taking place during gelatinization, e. g., changes
in the heat- and electro-conductivity and the drying of the gel formed. A
spherical bicalorimeter (Fig. 1) was used for investigating the heat-conduc-
tivity. This is a metal sphere surrounded by a thin spherical layer of the
investigated liquid. Under regular conditions the difference of the temper-
atures of the thermostat medium and the center of the bicalorimeter is ex-
pressed by the formula:

$$t_f - t = (t_f - t_o)e^{-m\tau} \quad \text{or} \quad \ln(t_f - t) = \ln(t_f - t_o) - m\tau \quad (1),$$

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The effect of the gelatinization process of...

where t_f is the thermostat temperature, t_0 - the initial temperature of the bicalorimeter, t - temperature of the central part of the bicalorimeter corresponding to the duration τ of its heating up, m - rate of heating. Figure 2 shows the relationship of $\ln(t_f-t)$ to the duration of the heating. The coefficient of the heat-conductivity of the liquid λ is determined from the formula:

$$\lambda = \frac{1-1}{12}(C_1 \gamma_1 + \frac{1-1}{1} C_i) D_1^2 m \tag{2},$$

where $1 = D_1/D_2$ is the ratio of the internal and external diameters of the bicalorimeter; $C_1 \gamma_1$ - the thermal capacity of the metal sphere; $C\gamma$ - the volumetric thermal capacity of the investigated liquid. In the experiments the method of regular heating of the bicalorimeter was supplemented by the method of stationary internal heating of the sphere, inside of which a heater was placed. For the case of stationary heating of the double-layer sphere, the heat conductivity coefficient is expressed by

$$\lambda = \frac{Q_{aver.} \cdot \mathcal{C}}{F_{aver.} \cdot \Delta t} \tag{3a}.$$

The quantity of heat transmitted through the layer ($Q_{stationary}$) was determined from the expenditure of electric energy by the heater. The method of

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regular conditions was used to determine the relationship λ of the latexes and the gelatinizing mixtures to the temperature, and the stationary conditions method was used for determining the kinetics of the λ change during the gelatinization process and that of syneresis. In order to determine the effect of gelatinization on the heat-conductivity, the kinetics of the temperature change relationship to the heat-conductivity was investigated both for revertex and latex L-7 (Figs. 3, 4). It was noted that immediately after gelatinizing agents are introduced into the latex mixture, processes occur causing a decrease in the heat-conductivity of the system. The results obtained showed that after the system has reached a certain degree of stability even before the formation of a solid gel, structures are formed in it gradually, which sharply limit its mobility in certain sections, hampering convection, diffusion and heat-exchange and thus decreasing the heat-conductivity. The change of the latter and that of the electro-conductivity does not stop after the formation of the solid gel: both the electric resistance and the heat-conductivity increase. The heat-conductivity was measured when the discharging liquid was removed from the system, in order to determine the effect of the syneresis on the thermal-conductivity (Fig. 5). It is pointed out that the change both in the heat-conduc as well as that of

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the effect of the gelatinization process of...

due to syneresis begins before the removal of the liquid rer dry on the change in the electric con and age s b these dry out showed that this process dif ing out of the latex in the usual film-formation. The ob of re the concentratio at the moment of gelatinization bring on, whereby the fact of gel formation proper does not af the relationship of the electric resistance to the moisture cont in the system. There are 6 graphs, 2 diagrams and 6 references: 5 Soviet, English.

Card 4/7

KHAZEN, M. M.

Khazen, M. M. "A low-power steam turbine for municipal power plants," In the collection: Kommunal energetika, Moscow-Leningrad, 1949, p. 3-38.

So: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, N^0. 17, 1949).

KHAZEN, M.M., doktor tekhnicheskikh nauk.

Relative steam consumption under varying conditions of locomotive
steam engine operation. Sbor.trud.Akad.zhel.transp. no.3:105-113
'54. (MLRA 9:8)

(Locomotives)

KHAZEN, M.M., professor.

Selecting an economical turbogenerator having steam extraction.
Trudy MTEI no.2:86-100 '55.   (MLRA 9:11)
                      (Steam turbines)

BENESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.N., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener, GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; ILIN, L.Ye., professor, doktor tekhnicheskikh nauk; YULENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BARNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

BENESHEVICH, I.I.----(continued)   Card 2.
VASIL'YEV, V.F.; GONCHAROV, N.G., inzhener; DERIBAS, A.T., inzhener;
DOBROSEL'SKIY, K.N., dotsent, kandidat tekhnicheskikh nauk; DLUGACH,
B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhni-
cheskikh nauk; ZEMBLINOV, S.V., professor, doktor tekhnicheskikh
nauk; ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P.,
kandidat tekhnicheskikh nauk; KARETNIKOV, A.D., kandidat tekhniche-
skikh nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, F.P.,
professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhni-
cheskikh nauk; KUCHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener;
MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV,
M.S., inzhener; MEDEL', O.M., inzhener; NIKITIN, V.D., professor,
kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I.,
kandidat tekhnicheskikh nauk; PETROV, A.P., professor, doktor tekhni-
cheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh
nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SEROBYEV,
Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhni-
chekikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener;
TALDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh
nauk; USHAKOV, N.Ya., inzhenr; USPENSKIY, V.K., inzhener; FEL'DMAN,
E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener;
KHOKHLOV, L.P., inzhenr; CHERNOMORDIK, G.I., professor, doktor
tekhnicheskikh nauk; SHAMAYEV, N.F., inzhener; SHAPIRKIN, B.I.,
inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor;
TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhni-
cheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh
                                        (Continued on next card)

BENESHEVICH, I.I.--- (continued)   Card 3.
    nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K.,
    inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, N.I.,
    inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk,
    redaktor; ROBEL', R.I., otvetstvennyy redaktor

    [Technical reference manual for railroad engineers] Tekhnicheskii
    spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo.
    Vol.10. [Electric power supply for railroads] Energosnabzhenie zhelez-
    nykh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p.   Vol.13.
    [Operation of railroads] Ekspluatatsiia zheleznykh dorog. Otv. red.
    toma R.I.Robel'. 1956. 739 p.   (MLRA 10:2)

    1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)
        (Electric railroads)   (Railroads---Management)

AUTHOR: Khazen, M. M.

TITLE: Discharge Rates and Pressures of Steam and Gas Turbines Under
           Operational Conditions Other Than the Design Condition (Raskhody
           i davleniya pri neraschetnykh usloviyakh raboty parovoy i gazovoy
           turbin).

ABSTRACT: The conditions of operation are investigated for a group of reactive
          stages of a turbine operating outside the design range on the
          premise of subcritical flow. From the equation of continuity, and
          assuming the velocity coefficient to be constant, the author obtains
          an equation for the determination of the steam discharge rate
          through the turbine. The expression obtained differs somewhat
          from the analogous Flügel formula. Comparison of test data with
          the results of the calculations shows that the magnitude of the
          error in the calculation increases, attaining as much as 4-5%,
          for operations of the turbine far outside of its design range.
                                                        L. I. Kiselev

Card 1/1

KHAZEN, M.M., doktor tekhnicheskikh nauk, professor.

Variable operating conditions of the exhaust steam blast pipe
and turbines on locomotives. Sbor.trud.Akad.zhel.transp.no.4:
145-176 '56.   (MLRA 10:2)
         (Locomotives)

KHAZEN, M.M.

KHAZEN, M.M., prof., doktor tekhn.nauk.

Technical and economic efficiency of using gas turbine locomotives.
Zhel.dor.transp. 39 no.9:20-25 S '57.   (MIRA 10:10)
                    (Gas turbine locomotives)

KHAZEN, Moisey Mikhaylovich

[Technical and economic effectiveness of gas-turbine locomotives]
Tekhniko-ekonomicheskaia effektivnost' gazoturbovoza. Moskva,
Transzheldorizdat, 1957. 67 p.   (MIRA 14:4)
        (Gas-turbine locomotives)

KHAZEN, Moisey Mikhaylovich, prof., doktor tekhn.nauk; ZHIRITSKIY, G.S., prof., doktor tekhn.nauk, zasluzhennyy deyatel' nauki i tekhniki, retsenzent; SHEVCHENKO, L.A., kand.tekhn.nauk, red.; MEDVEDEVA, M.A., tekhn.red.

[Gas turbines for locomotives] Lokomotivnye gazoturbinnye ustanovki. Moskva, Vses.izdatel' sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 419 p.   (MIRA 13:9)
                  (Gas-turbine locomotives)

KHAZEN, M.M., prof.

Determining the torque of a traction gas turbine. Trudy MIIT
no.138:20-34 '61.   (MIRA 14:12)
                    (Gas turbines—Testing)

AUTHOR: Khazen, M. M.

TITLE: On the determination of the torque in traction gas-turbines

TEXT: An equation relating the torque in gas-turbine stages to the rotational speed has been derived from the continuity and energy equations as well as from the velocity-triangle expressions. Other equations have been obtained for determining the turbine reaction rate and the gas flow through the turbine stages in dependence on the rotational speed. [Russian Abstracter's note: As it results from the author's calculation, upon sudden reduction of turbine-rotor velocity (down to zero), the gas flow through the turbine tends to increase by 20% as compared with the rated value. Calculations and experiments by other authors have shown that in the most favorable case, i.e. at a high reaction rate and small pressure drop in the stages the gas flow through the turbine stages only increases by 3-5% and not by 20% at a low reaction rate as assumed by the author.]

[Abstracter's note: Complete translation.]

Card 1/1

KHAZEN, Moisey Mikhaylovich; IVANOV, Igor' Ivanovich; ARONOVICH,
Simon Savvich; YERMOLAYEV, A.A., kand. tekhn. nauk, dots.
retsenzent; MEL'NIK, V.A., inzh., red.

[Heat and power systems] Teplosilovoe khoziaistvo. Moskva,
Transport, 1964.   329 p.   (MIRA 17:8)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo trans-
porta (for Yermolayev).

KHAZEN, M.M. prof.

Consumption characteristics of a gas-turbine plant in electric
power stations. Trudy MIIT no. 179:80-91 '64.

Significance of the boosting of the initial parameters of the
steam in heat and electric power plants. Ibid.:129-135
(MIRA 17:7)

KHAZEN, Z., prepodavatel'

Graphic works on mechanical drawing. Prof.-tekh. obr. 21 no.10:
19 0 '64.   (MIRA 17:11)

1. Professional'no-tekhnicheskoye uchilishche No.2 Moskovskoy
oblasti.

GRISHPUN, L.Ye., mayor med.slushby., KHAZENSON, L.B., kapitan med.slushby, kand.med.nauk

Carriers of Breslau-type bacteria. Voen.-med.zhur. no.12:80 D '55
(MIRA 12:1)

(SALMONELLA TYPHIMURIUM)

KHAZENSON, L.B.; BIRGER, M.O.

Using filter paper discs for determining the sensitiveness of
dysenteric pathogens to antibiotics. Lab.delo 2 no.3:23-25
My-Je '56.   (MLRA 9:10)
        (BACTERIA, PATHOGENIC)   (ANTIBIOTICS)

Khazenson, L.B.

SOMOV, G.P.; KHAZENSON, L.B.

Length of incubation in dysentery. Zhur.mikrobiol.epid. i immun.
28 no.1:16-17 Ja '57.   (MIRA 10:3)

1. Iz II Voenno-morskogo infektsionnogo gospitalya.
   (DYSENTRY, BACILLARY, physiology.
      incubation time (Rus))

Khazenson, L.B.

SOMOV, G.P.; KHAZENSON, L.B.

Some clinical bacteriological characteristics of the carrying of
dysentery pathogens in "healthy" persons. Zhur.mikrobiol.epid. i
immun.,supplement for 1956:49-50 '57
(SHIGELLA)   (MIRA 11:3)

KHAZENSON, L.B.

SOMOV, G.P.; KHAZENSON, L.B.

Epidemiological characteristics of the carrying of Shigella
dysenteriae by normal subjects. Zhur.mikrobiol.epid. i immun.
28 no.8:130-131 Ag '57.   (MIRA 11:2)

1. Iz sanitarno-epidemiologicheskoy laboratorii, Vladivostok.
        (DYSENTERY, VACILLARY, transmission,
            carriage by normal subjects (Rus))

ANSHELES, I.M.; FRIDMAN, B.A.; KLUSHINA, T.A.; STENINA, Ye.S.; KHAZENSON, L.B.;
TARASOVA, Ye.F.

Influenza pandemic of 1957 and certain epidemiological and virological
characteristics of influenza in Leningrad. Vop. virus 4 no.1: Ja-F '59
(MIRA 12:4)

1. Leningradskiy institut epidemiologii, mikrobiologii i gigiyeny imeni
Pastera, Leningradskaya gorodskaya sanitarno-epidemiologicheskaya stant-
siya i 39-ya poliklinika.
(INFLUENZA, epidemiol.
in Russia (Rus))

NOVOGORODSKAYA, E.M.; KHAZENSON, L.B.

Coli enteritis and principles for the organization of its
control among young children. Pediatriia no.5:31-36 '61.
(MIRA 14:5)

1. Iz laboratorii kishechnykh infektsii (rukovoditel' E.M.
Novogorodskaya) i sektora epidemiologii (rukovoditel' I.M.
Ansheles) Instituta epidemiologii, mikrobiologii i gigiyeny
imeni Pastera (dir. - kand.med.nauk M.Ya. Nikitin, zam.
dir. po nauchnoy chasti - prof. K.N. Tokarevich).
(ESCHERICHIA COLI)

NOVGORODSKAYA, E.M.; KHAZENSON, L.B.

Certain epidemiological rules in coli enteritis in infants. Sov.
med. 25 no.2:68-74 F '61.   (MIRA 14:3)

1. Iz laboratorii kishechnykh infektsiy i sektora epidemiologii
Instituta imeni Pastera (Leningrad).
          (ESCHERICHIA COLI)   (INTESTINES—DISEASES)

KRIZHANON, L.S.; FRIDMAN, E.A.; VITEL'S, L.A.; SHVER, TS.A.

Influence of meteorological factors on the incidence of influenza and acute catarrh of the respiratory tracts. Trudy Len.inst. epid.i mikrobiol. 22:166-173 '61. (MIRA 16:2)

1. Iz laboratorii grippa (zav. E.A. Fridman) i sektora epidemiologii (zav. I.M. Ansheles [deceased]) Leningradskogo instituta epidemiologii i mikrobiologii imeni Pastera i otdela klimatologii Glavnoy geofizicheskoy observatorii (zav. V.P. Pastukh).
          (LENINGRAD—INFLUENZA) (LENINGRAD—CATARRH)
          (LENINGRAD—WEATHER— MENTAL AND PHYSIOLOGICAL EFFECTS)

KHAZENSON, L.B.

Some problems of the epidemiology of colienteritis. Trudy Len.
inst. epid. i mikrobiol. 21:5-14'60.   (MIRA 16:6)

1. Iz sektora epidemiologii i laboratorii kishechnykh infektsiy
Leningradskogo instituta epidemiologii, mikrobiologii i gigiye-
ny Imeni Pastera.
          (ESCHERICHIA COLI)   (INTESTINES--DISEASES)

KHAZENSON, L.B.

Characteristics of colienteritis foci developing in day nur-
series. Trudy Len. inst. epid. i mikrobiol. 21:15-23'60.
                                             (MIRA 16:6)

1. Iz sektora epidemiologii i laboratorii kishechnykh infektsiy
Leningradskogo instituta epidemiologii, mikrobiologii i gigiye-
ny imeni Pastera.
            (LENINGRAD--ESCHERICHIA COLI)
            (LENINGRAD--INTESTINES--DISEASES)

KHAZENSON, L.B.

Characteristics of colienteritis foci developing in hospitals. Trudy Len. inst. epid. i mikrobiol. 21:24-32'60.

(MIRA 16:6)

1. Iz sektora epidemiologii i laboratorii kishechnykh infektsiy Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera.

(ESCHERICHIA COLI)   (INTESTINES—DISEASES)

LOSEVA, A.G.; KHAZENSON, L.B.; D'YACHKOVA, Ye.A.; MONOSOVA, S.M.

Closed outbreak of diseases caused by enteropathogenic
Eschirichia coli of the serological type O111. Trudy Len.
inst. epid. i mikrobiol. 21:33-39'60.   (MIRA 16:6)

1. Iz kafedry pediatrii I Leningradskogo meditsinskogo in-
stituta, sektora epidemiologii i laboratorii kishechnykh
infektsiy Lenintradskogo instituta epidemiologii, mikro-
biologii i gigiyeny imeni Pastera, Pervoy Leningradskoy
detskoy bol'nitsy i Sanitarno-epidemiologicheskoj stantsii
Oktyabr'skogo rayona Leningrada.
          (LENINGRAD—ESCHERICHIA COLI)
        (LENINGRAD—INTESTINES—DISEASES)

KHAZENSON, L.B.

Evaluation of the epidemiological significance of conva-
lescents following colienteritis. Zhur. mikrobiol., epid.
i immun. 42 no.7:82-85 Jl '65.   (MIRA 18:11)

1. Institut epidemiologii i mikrobiologii imeni Pastera,
Leningrad.

KHAZENSON, L.B.

Some epidemiological regularities of colienteritis. Trudy
Irk. NIIEM no. 7:310-318   '62   (MIRA 19:1)

1. Iz sektora epidemiologii Leningradskogo instituta epidemio-
logii i mikrobiologii imeni Pastera.

L 4872-66

ACC NR: AP5026565   SOURCE CODE: UR/0286/65/000/019/0128/0128

INVENTOR: Voynich, L. K.; Zaytsev, I. K.; Sidorov, N. A.; Khazey, A. F.

ORG: none

TITLE: Pneumohydraulic shock absorber. Class 63, No. 175401

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 128

TOPIC TAGS: shock absorber, pneumohydraulic shock absorber

ABSTRACT: An Author Certificate has been issued for a pneumohydraulic shock absorber (see Fig. 1) for load-carrying vehicles. The unit contains the following: a primary cylinder filled with a liquid and compressed gas (basic element, a cover ... the lower end of the primary cylinder, which ... ... connecting the working liquid, a piston rod ... ... and located inside the primary cylinder, a device connecting a high-... cavity with the plunger pump and the reservoir ... a pressure cylinder connected in the primary cylinder, the ... ... connected to a circular cavity between the plunger ... a pressure cylinder through calibrated holes and a check valve ... ... damping, and a cover mounted on the upper end of the back-pressure cylinder and serving as the upper shock-absorber support. To prevent leakage of the working liquid and compressed

Card 1/3   UDC: 629.11.012.82
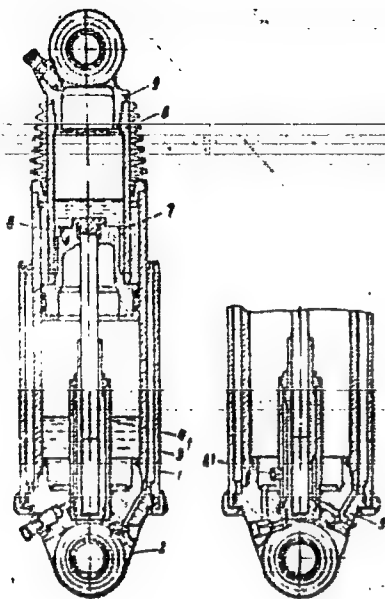
L 4872-66

ACC NR: AP5026565

Fig. 1.   Pneumohydraulic shock absorber

1 - Primary cylinder; 2 - lower cover;
3 - casing of reservoir for collecting
working liquid; 4 - plunger pump; 5 - flow
channel; 6 - back-pressure cylinder;
7 - calibrated hole; 8 - check valve;
9 - upper cover; 10 - safety valve.

Card 2/3

L 4872-66

ACC NR: AP5026565

gas from the primary cylinder into the reservoir when the shock absorber is extended, the unit is equipped with a valve set for minimum permissible pressure in the primary-cylinder high-pressure cavity. This valve is located in the primary-cylinder cavity and connects it to the working cavity of the plunger pump. Orig. art. has: 1 figure.

[LB]

SUB CODE: IE / SUBM DATE: 14Jul62/ ATD PRESS: 4/36

Card 3/3

KHAZEYEV, Gimadlislam Fatkhlislamovich; BOBYLEVA, L.V., red.; MAKSIMOV,
        A.A., red.; PONOMAREVA, A.A., tekhn. red.

        [Greatest results with least expenditures] Naibol'shie rezul'-
        taty pri naimen'shikh zatratakh, Moskva, Ekonomizdat, 1963.
        63 p.   (MIRA 16:4)
                (Industrial management)

KHAZHOK, N.

CA

PROCESSES AND PROPERTIES INDEX

2/

Determination of furfural in refined mineral oils. N. Khazhak. Azerbaidzhanskoe Neftyanoe Khoz. 1936, No. For detn. of furfural in petroleum products the bromide-bromate method is best. The furfural can be removed from petroleum oils by washing with water after a thorough dilution with petroleum ether. The procedure is described. Six references. A. A. B.

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

KHIZHIK, N.

Ca

22

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66-96; abstr. in Ref. Zh. Khim. (Ref. J. Chem., ...
Tests in an experimental chamber showed that increasing ... concentration of air

... produced as carbon black from 3% to 1.7% ... increasing the ... ...
... carbon dioxide in the natural gas from 1.7 to 10.5 also decreased the yield of
carbon black, but not to the same extent. The quality of the carbon black
was not appreciably affected.

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KHAZHAKYAN L.V.

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                    (Acetylene)   (Polymerization)

KHAZHAKYAN, L.V.

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Anomalous chloromethylation of methyl ester of o-isopropoxybenzoic acid. Izv. AN Arm.SSR.Khim.nauki 17 no. 2:
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TERZYAN, A.G.; SAFRAZBEKYAN, R.R.; KHAZHAKYAN, L.V.; TATEVOSYAN, G.T.

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O konformnom otobrazhenii dyukhsvyaznykh oblastey na kol'tso.　Tbilisi, Trudy Matem.
In-ta. Gr. fil. AN, 1 (1937), 89-105.

SO:　Mathematics in the USSR, 1917-1947.
　　　edited by Jurosh, A. G.
　　　Markushevich, A. L.
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　　　Moscow-Leningrad, 1948

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KHAZHALIYA, G. YA.

Ob odnom minimal'nom svoystve konformnogo otobrazheniya dvukhsvyaznykh oblastey.
Kutaisi, trudy ped. In-ta, 3 (1941).

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      edited by Jurosh, A. G.,
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520. **Khozhelizu, G. Iu.**, Steady motion of a liquid in a pipe which is not quite cylindrical. (in Russian) Doklad. Akad. Nauk SSSR (N.S.) 95, 3, 465-468 1954. Ref. Zh. mat. 1955, Rev. 3174.

Examination of the axially symmetric motion of a liquid. The x axis is taken as the axis of the symmetry and the surface $x0y$ is the axial section of the flow. The characteristics are realised at the boundary $y = y(x)$ on the following assumptions: that in the case of flow the values $y(x)$, y', ..., y'', ... are considered uniformly small relative to x; if the rate of flow is determined at the boundary point, which retains only terms of the second degrees relative to $y(x)$, $y'(x)$, $y''(x)$.

By examining certain particulars, one obtains the following equation for the required motion:

1. KHAZHALIYA, G. YA.

2. USSR (600)

4. Surfaces, Representation of

7. Some covering theorems for functions regular in doubly connected
   regions, Trudy Mat. inst. AN Gruz. SSR, 18, 1951.

9. Monthly List of Russian Accessions, Library of Congress, _____April,_____1953, Uncl.

KHAZHALIYA, G. Ya.

SUBJECT   USSR/MATHEMATICS/Theory of functions   CARD 1/2   PG - 433
AUTHOR   CHAZALIJA G.Ja.
TITLE   On the stationary movement of a fluid in a tube of nearly
            circular cylindric form.
PERIODICAL Mat.Sbornik, n. Ser. 38, 93-106 (1956)
            reviewed 12/1956

The author deduces a formula for the approximative solution of the problem
of the flow of an ideal fluid with axial symmetry in a tube which differs
few from a circular cylinder. If thereby the x-axis is taken as symmetry-
axis and if the x,y-plane is a plane passing through the axis in which the
boundary curve is given by $y = y(x)$, then the final formula is

$$V = \frac{H}{\pi y^3} \left(1 + \frac{1}{4} yy'' - \frac{1}{4} y'^2\right) + R_1.$$

Here V denotes the desired velocity of the flow in an arbitrary point of the
boundary curve, H the quantity of the flowing out in the unit time and R_1
a very small remaining term which serves for the estimation of the approximation.
The assumptions are as follows: 1) For finite mean velocity the magnitudes
$y(x)$, $y'(x)$, $y''(x)$ and $y'''(x)$ are to be uniformly small with respect to x;
2) for the determination of V only those terms are taken into account which
are small of second order with respect to $y(x)$, $y'(x)$ and $y''(x)$.

Mat.Sbornik, n. Ser. 38, 93-106 (1956)   CARD 2/2   PG - 433

The applied method is that of the conformal representation where the author
generalizes a formula due to M.A. Lavrent'ev (Conformal representations with
applications to certain questions of Mechanics, Moscow 1946, p.118, formula 108)
which refers to the determination of the elongation of a small strip
$0 < y < y(x)$ of the x,y-plane under conformal mapping onto a linearly bounded
strip $0 < v < H/2$ of the u,v-plane. Here $u(x,y)$ means the velocity potential
and $v(x,y)$ the stream function.
The main theorem had already been published by the author in a short note
(Doklady Akad. Nauk 95, 465-468 (1954)); here she gives a detailed proof
and estimations for the exactness of the formula.

KHAZHALIYA, G. Ya.

67058

SOV/44-59-9-9002

16(1) 16.3000

Translation from: Referativnyy zhurnal.Matematika,1959,Nr 9,p 67 (USSR)

AUTHOR: Khazhaliya,G.Ya.

TITLE: On a Covering Theorem for Functions Regular in Doubly Connected Domains

PERIODICAL: Tr.Kutaissk.gos.ped.in-ta,1958,18,251-258

ABSTRACT: Let $\sum$ be a family of (unique) functions $f(z)$ regular and schlicht in the annulus $D_R(1 < |z| < R)$ and for which $|f(z)| \geqslant 1$ for $z \in D_R$ and

$$\frac{1}{2\pi i} \int_{|z|=r} \frac{f'(z)}{f(z)} \, dz = 1, \text{ where } 1 < r < R.$$

Let B_f be the doubly connected domain onto which the function $w = f(z)$ of the class $\sum$ maps the annulus D_R; let Γ_1 and Γ_2 be the boundary continua of B_f. As the star B_f^* of the domain B_f with respect to the point $w=0$ the author denotes an open set which contains B_f and which has the properti : 1) every ray of $w=0$ has points of the B_f (with the exception of at most finitely many rays). 2) If w_1 and w_2 belong to B_f^* and if the straight line

Card 1/2

AUTHOR: Khazhaliya, G. Ya. (Kutaisi)

TITLE: 39-45-1-3/6

On an Approximative Formula of the Theory of Conformal Mappings
(Ob odnoy priblizhennoy formule teorii konformnykh otobrazheniy)

PERIODICAL: Matematicheskiy Sbornik, 1958, Vol 45, Nr 1 pp 31-50 (USSR)

ABSTRACT: The consideration of hydrodynamic problems led Lavrent'yev to
the conformal mapping of a curvilinear strip onto a straight-
lined one by a function $f(z)$. There it was necessary to esti-
mate the value of $|f'(z)|$ on the boundary of the strip. The
estimations obtained in this connection by Lavrent'yev [Ref 1]
are generalized - - by the author to the
case that the curvilinear strip boundary possesses a discon-
tinuous curvature in one point. In this investigation the esti-
mation of the integral

$$\lambda(\alpha) = \int_{\alpha}^{\infty} \frac{(\tau - \alpha)^2}{\operatorname{sh}^2 \frac{\pi \tau}{2}} \, d\tau$$

has a vital role   for which the approximative expression

Card 1/2

On an Approximative Formuly of the Theory of Conformal
Mappings   39-45-1-3/6

$$\lambda(\alpha) = \frac{\pi^2}{6} - \frac{4\alpha}{\pi^2} - \frac{4\alpha^2}{(e^{\pi\alpha}-1)} + \frac{8\alpha}{\pi^2} \lg (1 - e^{-\pi\alpha})$$

is given. There are 4 figures and 1 Soviet reference.

SUBMITTED: November 26, 1956
AVAILABLE: Library of Congress

Card 2/2

D-4

USSR / Human and Animal Morphology, Normal and Patho-
          logic -- Cardiovascular System

Abs Jour: Ref Zhur-Biol., No 13, 1958, 59839

Author : Gavrilov, L. F.; Khazhestkin, E. A.

Inst   : Ryazan' Medical Institute

Title   : Concerning Trabeculae Carneae Cordis in Man

Orig Pub: Materialy 19-y nauchn. konferentsii Ryazansk. med.
          in-ta po probleme: "Anatomiya i patologiya organov
          grudnoy polosti," Ryazan', 1956, 10-13

Abstract: Three types of trabeculae (T) were found on 11 pre-
          parations: basal, loose, and composite. The T of
          the left ventricle were well expressed on 9 pre-
          parations, flattened on 2 and on 10 preparations,
          traversed the anterior, posterior and external

Card 1/4

USSR / Human and Animal Morphology, Normal and Patho-   S-4
logic -- Cardiovascular System

Abs Jour: Ref Zhur-Biol., No 13, 1958, 59839

outer layer, while T were observed in the arte-
rial cone on two preparations. On all the prepara-
tions, a T (1.6-6 centimeters long, 0.1-0.3 cen-
timeters thick), directed downward and forward to
the apex of the heart, branched out from the in-
ferior part of the interventricular septum and
joined to the T issuing from the posterior papil-
lary muscle. The T of the right ventricle were
thicker and not as evenly distributed, being
found in 3 preparations along the anterior and
medial walls, on 2, along the medial, anterior, and
posterior walls and on 6, along the anterior and
posterior walls. The T of the medial wall were
basal in type, those of the anterior wall, basal
(4) and loose (6) and those of the posterior wall,

Card 3/4

ACCESSION NR: AP4029710   S/0136/64/000/004/0087/0087

AUTHOR: Khazhgaliyev, M. A.

TITLE: Production of High-Quality Calcium Molybdate

SOURCE: Tsvetny*ye metally*, no. 4, 1964, 87

TOPIC TAGS: calcium molybdate, alloy, copper, bronze, brass, mother liquor, sulfur, impurity, molybdenum

ABSTRACT: The author investigated a new method designed to produce calcium molybdate with 47.4 to 47.8% Mo from any kind of sodium molybdate solution. Calcium molybdate is precipitated in the cold, and washed with the help of an ion-containing electrolyte from adsorption sulfur. The calcium molybdate crystals are small and grow slowly. The sulfur removal is greatly facilitated and the sodium molybdate washed off with great ease. The precipitation temperature was found to affect the sulfur contents in the calcium molybdate. After cold precipitation from a solution with pH = 7.0 to 8.0 the S contents was only 0.00 to 0.004%. The use of 105% precipitant pro- duces calcium molybdate without S and a mother liquor with 0.30 to

Card 1/3

ACCESSION NR: AP4029710

0.45 g/l Mo which is 3 to 4 times lower than that obtained by current production processes. The study of the Mo contents in the initial solution showed that a high-quality product is extracted from very poor solutions with up to 5 g/l metal. The S_2 content was 0.102% as against 0.47% observed in current production processes. The SO_4 concentration has no effect on the S and Mo contents in the finished product. A lowering of the pH factor leads to a drastic increase in S and Mo. A low pH factor only favors the Mo contents in calcium molybdate because of the decrease of calcium carbonate in the deposit The removal of S with a sodium molybdate wash eliminates Mo losses. Without the use of a calcium molybdate solution, the author finds it impossible to produce calcium molybdate which would satisfy technical requirements. By using 12- to 130% precipitant which was found not to affect the S content in the calcium molybdate, a low pH factor nonwithstanding, the author succeeded inobtaining a high-quality product and mother liquors depleted of molybdate while Mo extraction rose by 1.5 to 2%. However, the Mo content in the sodium molybdate solution is greatly decreased with the use of considerable amounts of

Card 2/3

KHA\:\:HIDEKOV, G.

Prof. Gotse Tenchov, physician, educator and humanitarian. (10/2, 1906 - 11/26, 1960) Khirurgiia, Sofia 14 no.7:648-653 '61.

(OBITUARIES)

Effect of the granulometric characteristics on the float-ability of sulfide minerals. I. I. Plaksin and G. N. Khazhinskaya. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1947, 757-65(in Russian).—In up to 10-min. flotation expts. on a Morning-Sullivan-type machine, with galenite ground to 60, 100, 150, 200, and 300 mesh, with pine oil as froth agent and Bu xanthate, 50-250 g./ton, a coll. effect. Increase of the latter resulted in increased velocity of flotation; however, with 300-mesh ore, even with 300 g./ton xanthate, only 65.23% were extd. in the 1st min., as against 92.05% with 60 mesh. Partly, this can be due to the insufficiency of the air supplied to provide enough bubbles to lift the larger no. of finest particles, but specific differences of interaction with chem. reagents undoubtedly play a role. The effect of the amt. of CaO (0-5 kg./ton, pH 7-13) was detd. on 40-g. samples of chalcopyrite, chalcocine, pyrrhotite, pyrite, and galenite. With chalcopyrite, only the coarsest fraction (60 mesh) is depressed by 19% with the highest .5 kg./ton) CaO content; fine fractions remain unaffected. With chalcosine, 3 kg. CaO/ton increases the enrichment with all grain sizes, particularly during the 1st min.; 5 kg./ton lowers the rate and the yield of flotation of the finer fractions. The effect of grain size is very pronounced with pyrite; pine oil 140 g./ton, xanthate 100 g./ton, CaO 5 kg./ton (0.11%), 100, 200, and 300 mesh, extn. in 3 min.; 59.70, 16.77, and 31.88, in 10 min.; 31.70, 19.19, and 47.49%; the min. of extn. with the 200 fraction is significant. With galenite 60-100 mesh, even 1 kg. CaO/ton depresses the enrichment considerably; with the 150-mesh fraction, the floatability increases somewhat with addn. of CaO 0.5 kg./ton, then decreases by about 3% and remains const.; CaO has practically no effect on the 200- and 300-mesh fractions. Evidently the flotation-depressing film of CaSO₄ is less firmly anchored on fine particles than on coarse grains. Analogous effects of particle size were ob-served also in the activation of sphalerite with CuSO₄; decrease of the size from 100 to 300 mesh lowered the extn. by 20%; increase of the amt. of CaO (to 5 kg./ton) did not interfere with the activation of 100-mesh sphalerite but did lower the extn. from fine sludge by over 30%; adhesion of the flotation-activating Cu(OH)₂ film on finer particles is poorer than on coarse grains. Increased superficial oxidation of the ore particles, through preliminary aeration or oxygenation (cf. *C.A.* 40, 4124⁹), promotes the formation of adherent insol. films by reaction with Ca(OH)₂ and thus extends the flotation-depressing effect of CaO to finer particle sizes. Alkali other than Ca(OH)₂ produces less stable depression; thus, with NaOH and pyrite, complete depression is attained only by oxidation combined with a high amt. of NaOH. That oxidation is paramount, follows from the fact that flotation of pyrite is not depressed by either NaOH or Ca(OH)₂ in a N atm. Incidentally, flotation of pyrite is often complicated by secondary deposits of Cu minerals along the edges of pyrite; presence of Cu⁺⁺ ions promotes reactivation by Na₂CO₃ of pyrite, previously depressed by CaO. In terms of the length of preliminary oxygenation, the effect is particularly great in the 1st 2 min. of flotation; with 50 g./ton xanthate, with grain sizes 60-150 mesh, extn. is markedly increased, to about the same extent with 15 and 30 min.; with finer (200-300) ore, longer lowers the velocity of flotation and the degree of extn.; the effects are much weaker between the 3rd and 10th min. of flotation; both the pos. effect of oxygenation on the 60-150 mesh class and its neg. effect on the 200-300 class are weaker with a higher concn. (250 g./ton) of xanthate. Possibly, the neg. effect of oxygenation on the fine-grain ore is due to oxidation beyond the degree favorable to flotation.

N. Thon